

测试报告

No. SHAMLP1700358402

日期: 2017年01月12日 第1页,共9页

台化聚苯乙烯(宁波)有限公司

中国·宁波·北仑·霞浦·台塑关系企业宁波工业园区PS厂

以下测试之样品是由申请者所提供及确认:耐冲击级聚苯乙烯粒

SGS工作编号: SHIN1701000495PC - SH

产品规格: HP8250

样品接收日期: 2017年01月06日

测试周期: 2017年01月06日 - 2017年01月12日

测试要求: 根据客户要求测试

测试方法: 请参见下一页

测试结果: 请参见下一页

结论: 基于所送样品进行的测试, 镉、铅、汞、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、邻苯二甲酸酯(如邻苯二甲酸二丁酯 (DBP)、邻苯二甲酸丁苄酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP))的测试结果符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求

通标标准技术服务(上海)有限公司
授权签名

刘海鹏

Helen Liu 刘海鹏
批准签署人

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测试结果:

测试样品描述:

样品编号	SGS样品ID	描述
SN1	SHA17-003584.001	白色固体颗粒

备注:

- (1) 1 mg/kg = 0.0001%
- (2) MDL = 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

RoHS 指令2011/65/EU附录II的修正指令(EU) 2015/863

- 测试方法:
- (1) 参考IEC 62321-5:2013, 用ICP-OES测定镉的含量
 - (2) 参考IEC 62321-5:2013, 用ICP-OES测定铅的含量
 - (3) 参考IEC 62321-4:2013, 用ICP-OES测定汞的含量
 - (4) 参考IEC 62321:2008, 用紫外-可见分光光度计比色法测定六价铬的含量
 - (5) 参考IEC 62321-6:2015, 用GC-MS测定PBBs(多溴联苯)和PBDEs(多溴二苯醚) 的含量
 - (6) 参考IEC 62321-8 Ed.1.0 (111/321/CD), 用GC-MS测定邻苯二甲酸酯的含量

测试项目	限值	单位	MDL	001
镉(Cd)	100	mg/kg	2	ND
铅(Pb)	1000	mg/kg	2	ND
汞(Hg)	1000	mg/kg	2	ND
六价铬(CrVI)	1000	mg/kg	2	ND
多溴联苯之和(PBBs)	1000	mg/kg	-	ND
一溴联苯	-	mg/kg	5	ND
二溴联苯	-	mg/kg	5	ND
三溴联苯	-	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯	-	mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	-	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND



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测试项目	限值	单位	MDL	001
二溴二苯醚	-	mg/kg	5	ND
三溴二苯醚	-	mg/kg	5	ND
四溴二苯醚	-	mg/kg	5	ND
五溴二苯醚	-	mg/kg	5	ND
六溴二苯醚	-	mg/kg	5	ND
七溴二苯醚	-	mg/kg	5	ND
八溴二苯醚	-	mg/kg	5	ND
九溴二苯醚	-	mg/kg	5	ND
十溴二苯醚	-	mg/kg	5	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND
邻苯二甲酸丁苄酯(BBP)	1000	mg/kg	50	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	1000	mg/kg	50	ND
邻苯二甲酸二异丁酯(DIBP)	1000	mg/kg	50	ND

备注:

- (1) 最大允许极限值引用自RoHS指令(EU) 2015/863。
- (2) 2015年6月4号发表在欧盟官方杂志(官方公报)上的RoHS指令(EU) 2015/863附录II限值中还包括邻苯二甲酸酯BBP, DBP, DEHP和DIBP。新的指令限制了电子电器产品的每一个均一材质中邻苯二甲酸酯含量不得超过0.1%。
- (3) 2021年7月22号开始, DEHP, BBP, DBP 和 DIBP的限制适用于医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。
- (4) DEHP, BBP, DBP 和 DIBP的限制不适用于2019年7月22日前投放市场的电缆及电子电气产品中用于维修、重复利用、功能更新及容量提升的备用配件以及2021年7月22日前投放市场的医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。
- (5) DEHP、BBP 和 DBP的限制不适用于玩具产品, 因为No.1907/2006附录XVII第51条已对玩具产品中的DEHP、BBP 和 DBP含量进行了限制。

多环芳香烃(PAHs)

测试方法: 参考AfPS GS 2014:01 PAK方法测试, 采用 GC-MS进行分析。

测试项目	单位	MDL	001
苯并(a)芘 (BaP)	mg/kg	0.1	ND
苯并(e)芘 (BeP)	mg/kg	0.1	ND
苯并(a)蒽 (BaA)	mg/kg	0.1	ND
苯并(b)荧蒽 (BbF)	mg/kg	0.1	ND
苯并(j)荧蒽 (BjF)	mg/kg	0.1	ND
苯并(k)荧蒽 (BkF)	mg/kg	0.1	ND
屈 (CHR)	mg/kg	0.1	ND
二苯并(a,h)蒽(DBA)	mg/kg	0.1	ND



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测试项目	单位	MDL	001
苯并(g,h,i)芘(二苯并(a,h)芘) (BPE)	mg/kg	0.1	ND
茚并(1,2,3-c,d)芘 (IPY)	mg/kg	0.1	ND
蒽(ANY)	mg/kg	0.1	ND
蒽(苯并(a)蒽) (ANA)	mg/kg	0.1	ND
苊(FLU)	mg/kg	0.1	ND
菲(PHE)	mg/kg	0.1	ND
芘(PYR)	mg/kg	0.1	ND
蒽(ANT)	mg/kg	0.1	ND
荧蒽(FLT)	mg/kg	0.1	ND
7项多环芳香烃总和[蒽(ANY),蒽(苯并(a)蒽) (ANA),苊(FLU),菲(PHE),芘(PYR),蒽(ANT),荧蒽(FLT)]	mg/kg	-	ND
萘(NAP)	mg/kg	0.1	ND
18项多环芳香烃总和	mg/kg	-	ND
材料分类	-	-	3
结论			符合

备注:

根据客户提供的信息, 测试样品为产品安全法涉及的非玩具产品。



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AFPS(德国产品安全委员会):GS 认证对多环芳香烃的要求

参数	1 类	2 类		3 类	
	设计意图为放入口中的材料或者玩具上与皮肤接触的材料(接触时间大于30秒).	未在 1 类规定中涵盖的材料,且可能与皮肤接触时间大于 30 秒的材料(长时间接触皮肤)或频繁接触皮肤.		未在 1 和 2 类规定中涵盖的材料,且可能与皮肤接触的少于 30 秒的材料(短期接触皮肤)	
		2009/48/EC 中适用的玩具	产品安全法涉及的其他产品	2009/48/EC中适用的玩具	产品安全法涉及的其他产品
苯并(a)芘 (BaP) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(e)芘 (BeP) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(a)蒽 (BaA) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(b)荧蒽 (BbF) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(j)荧蒽 (BjF) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(k)荧蒽mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
屈 (CHR) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
二苯并(a,h)蒽 (DBA)mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(g,h,i)花(二苯并苯) (BPE)n mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
蒽(1,2,3-c,d)芘 (IPY) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
萘烯(ANY), 萘(蒽嵌戊烷) (ANA), 苊 (FLU), 菲 (PHE), 芘 (PYR), 蒽 (ANT), 荧蒽 (FLT)之和 mg/kg	< 1 (总和)	< 5 (总和)	< 10 (总和)	< 20 (总和)	< 50 (总和)
萘 (NAP) mg/kg	< 1	< 2		< 10	
18 PAH之和	<1	< 5	< 10	< 20	< 50



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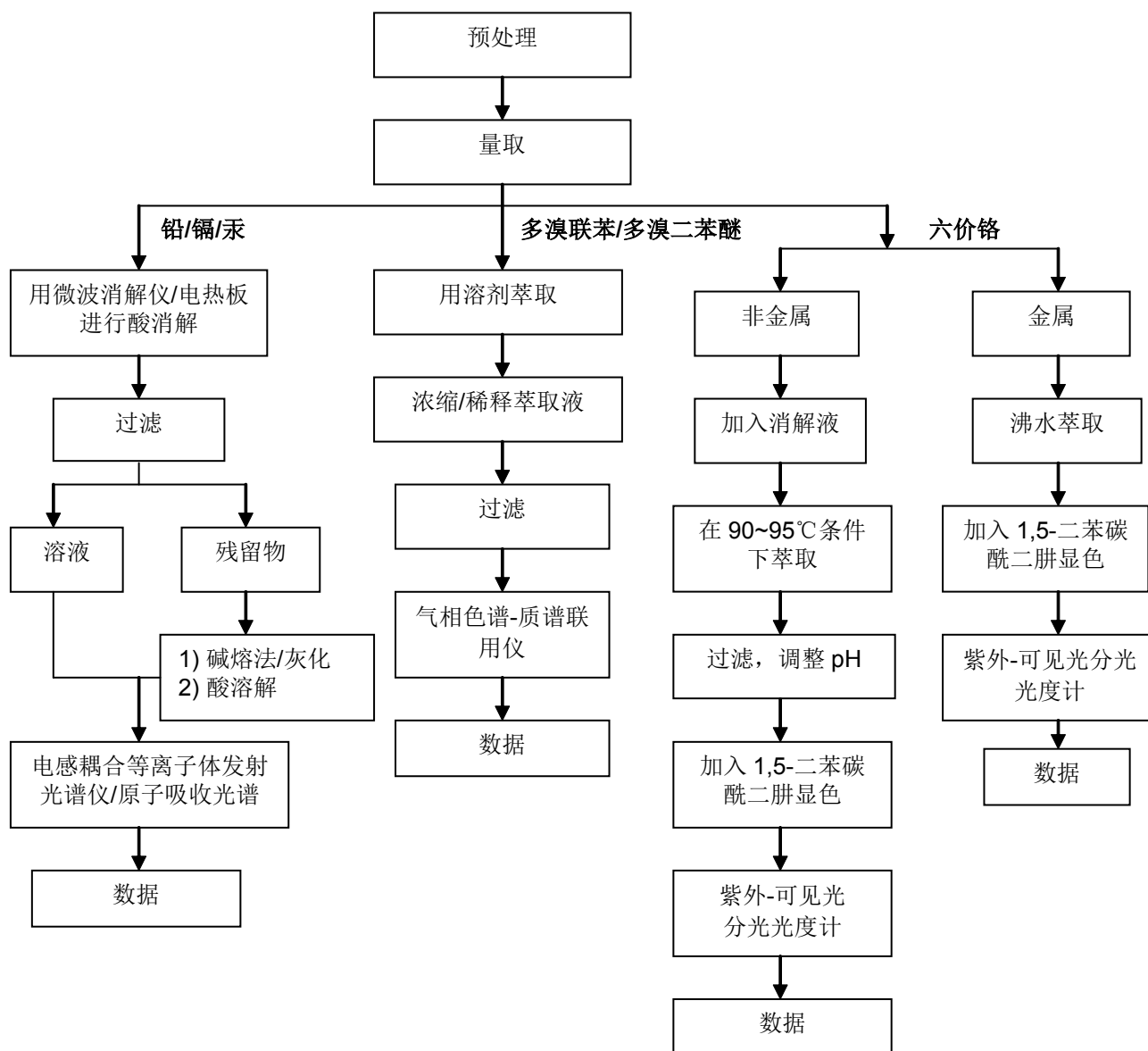
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附件

RoHS 测试流程图

- 1) 分析人员: 金叶/徐刚/李振 /宋柯静
- 2) 项目负责人: 施青/黄婷/徐亮/王晓艳
- 3) 样品按照下述流程被完全消解(六价铬和多溴联苯/多溴二苯醚测试除外)。



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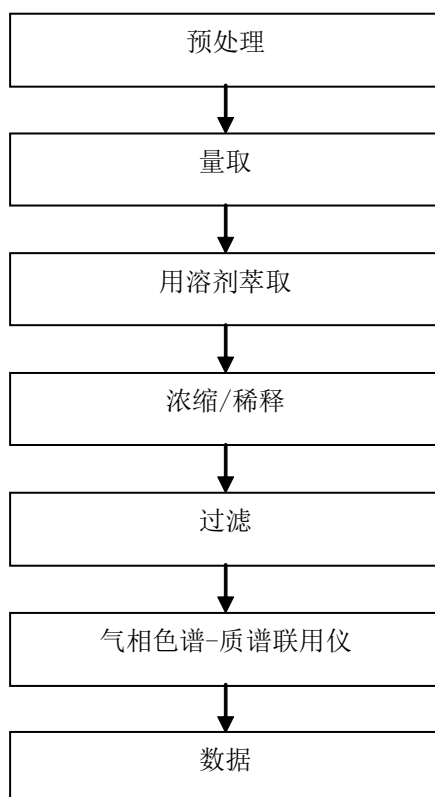
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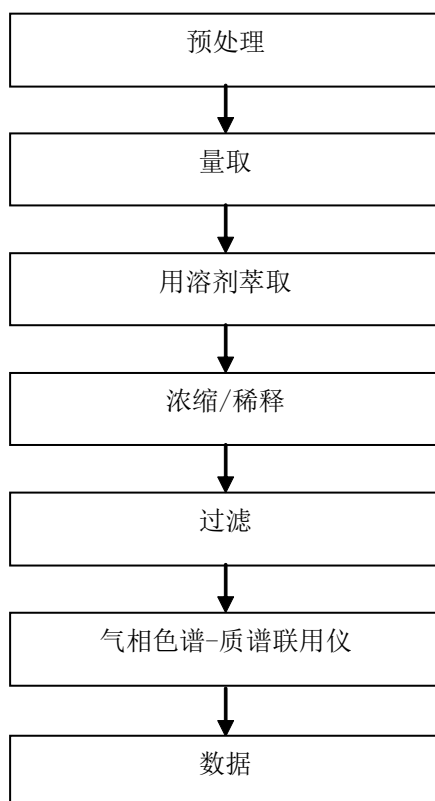
Phthalates 测试流程图

- 1) 分析人员: 高仰景
- 2) 项目负责人: 黄婷



PAHs 测试流程图

- 1) 分析人员: 刘慧
- 2) 项目负责人: 黄婷



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